

Title (en)

Power tool torque overload clutch

Title (de)

Überlastkupplungsvorrichtung für Kraftwerkzeug

Title (fr)

Embrayage à surcharge de couple pour outil motorisé

Publication

EP 1702723 A1 20060920 (EN)

Application

EP 06101107 A 20060131

Priority

- GB 0505457 A 20050318
- GB 0515576 A 20050729

Abstract (en)

A torque overload clutch (30) for an electrical power tool, such as a percussion hammer drill, is provided. The clutch is accommodated in a cavity (60) in a gear cog (24). Spring washers (48) are used to urge ball bearings (36) into indentations (42) formed in the base (44) of the cavity. The ball bearings are accommodated in cavities formed in a drive plate (40) which engages with the spindle drive (20) of the power tool. The spring washers are held in position by a circlip (52) or a threaded plate (65). The threaded plate arrangement provides means for compressing the spring washers with a consistent force across a manufactured batch. A method of manufacturing the clutch is also disclosed.

IPC 8 full level

B25D 16/00 (2006.01)

CPC (source: EP US)

B25D 16/003 (2013.01 - EP US); **B25D 2250/165** (2013.01 - EP US); **B25D 2250/321** (2013.01 - EP US)

Citation (search report)

- [XA] EP 0608083 A1 19940727 - BLACK & DECKER INC [US]
- [DXAY] DE 2522446 A1 19761209 - KRESS ELEKTRIK GMBH & CO
- [XAY] DE 10131220 C1 20030306 - METABOWERKE GMBH [DE]
- [XA] DE 3942806 A1 19910627 - METABOWERKE KG [DE]
- [XA] US 3686957 A 19720829 - KIRN MANFRED, et al
- [XA] GB 2069073 A 19810819 - HILTI AG
- [DA] WO 2004024398 A1 20040325 - BLACK & DECKER INC [US], et al
- [A] GB 1095067 A 19671213 - METS OWERKE KG CLOSS RAUCH & S
- [A] GB 1206853 A 19700930 - BOSCH GMBH ROBERT [DE]
- [A] DE 3832202 C1 19900322
- [A] FR 1196205 A 19591123 - GELENKWELLENBAU GMBH

Cited by

KR20200102593A; US8613452B2; GB2497670A; GB2497670B; WO2008107237A1; WO2008107250A1; WO2010006878A1; US9415497B2; EP2448715B1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1702723 A1 20060920; EP 1702723 B1 20140402; US 2006207775 A1 20060921; US 7886841 B2 20110215

DOCDB simple family (application)

EP 06101107 A 20060131; US 37701306 A 20060316